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Comparison of composition , thermal behaviour and polymorphism of pink guava (Psidium guajava) seed oil-palm stearin blends and lard (Article)

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Abstract

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A study was carried out to compare composition , thermal behavior , and polymorphic forms of palm stearin-pink guava seed oil blends with those of lard (LD). Four blends were prepared by mixing pink guava seed oil (PGO) with and palm stearin (PS) in different ratios: PGO-1, 40:60; PGO-2, 45:55; PGO-3, 50:50; PGO-4; 55:45. The blends and lard were compared in terms of their basic physicochemical parameters, fatty acid and triacylglycerol (TAG) compositions, melting, solidification and polymorphic properties. Results showed that PGO-2 and LD were found to display similarities in terms of slip melting point value and the peak maximum of the high-melting thermal transition. In the solid fat content (SFC) profile, PGO-2 and LD were found to display the least difference. In the X-ray diffraction analysis, PGO-2 displayed both β and β' polymorphs that were similar to the polymorphic form of LD.

Author keywords

Food lipids | Guava seed oil | Lard substitute

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